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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,435	08/17/2001	Hongjie Cao	1942	3469

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12/19/2003

Karen G. Kaiser
NATIONAL STARCH AND CHEMICAL COMPANY
10 Finderne Avenue
Bridgewater, NJ 08807-0500

EXAMINER

GOLLAMUDI, SHARMILA S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 12/19/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,432

Applicant(s)

SORENSEN, DAVID

Examiner

Sharmila S. Gollamudi

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14,16-18 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14, 16-18, and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Receipt of Extension of Time and Amendment C received on September 29, 2003 is acknowledged. Claims 1, 3-14, 16-18, and 20-28 are included in the prosecution of this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-14, 16-18, and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al (EP 0784970) in view of JP 11-236310.

EP teaches a hair cosmetic containing oxyalkylenized xanthan gum. The xanthan gum is prepared by conducting a reaction at 10-100 Celsius or 60-80 Celsius for 3-4 hours. See page 3, lines 45-51. The invention may be in the form of a hair setting composition containing 0.1-10% of the xanthan gum with a film-forming polymer. Suitable film-forming polymers such as acrylate copolymers are taught on page 6. The

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composition may be in the form of a permanent wave composition containing 0.1-10% of the xanthan gum and a reducing agent. See page 2, lines 43-54. A bundle of hair was towel-dried and the styling composition was applied to the hair, then the hair was wound around a rod, and dried naturally at a relative humidity of 98%. After the hair was dry, the curled hair was taken out of the rod and was suspended for 30 minutes. Table 2 sets forth the hair setting ability of the oxyalkylenized xanthan gum and had good hair-setting ability. Additionally the composition set forth in Table 2 is surfactant-free. The xanthan gum is added to water to provide for a xanthan gum solution and other components are added accordingly. See page 4. Furthermore, EP teaches the method of incorporating the xanthan gum into the composition is known in the art. See example 1.

EP does teach the moisture content of the xanthan gum.

JP 11-236310 teaches a composition containing xanthan gum for cosmetics with excellent stability, efficacy, feel, and film-forming ability. The reference teaches the "drying decrease" (moisture content) to be preferably under 12% (pg. 5, first paragraph). The reference teaches that if the drying decrease is too high then the xanthan gum will not heat sufficiently, thus decreasing viscosity of the gum if it is not adequately heated. The reference teaches the method of making xanthan gum prior to mixing it into a cosmetic composition. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. The reference discloses heating the gum 100 degrees and above to increase viscosity, and not to heat it above 140 degrees to avoid discoloration of the gum. The reference

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teaches the preferable range of the gum to be 5000-22000 cPs and thus it can be used in small quantities. (Note 4-6 and example 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings EP and JP and utilize a low moisture xanthan gum in the composition of EP. JP teaches the low moisture xanthan gum will indirectly effect the viscosity of the composition since it cannot heat well and if an increased quantity of xanthan gum is added to the composition, it will yield a greasy product; therefore one would be motivated being that the low moisture xanthan gum may be used in minimized quantity and still provide increased viscosity without resulting in a greasy product.

In regards to the recited viscosity and turbidity, it is deemed obvious to a skilled artisan in the art at the time the invention was made to manipulate the prior art's viscosity and turbidity parameters to provide for a desired result thorough routine experimentation. One would be motivated to increase the viscosity of a composition to yield a particular cosmetic form; i.e. a hair lotion versus a hair gel. Additionally, it is known to skilled artisan that a turbid solution has a value about 100 NTU or higher whereas a slight hazy solution has a value 20 to 50 NTU. See art of interest US 6,147,038. Therefore, a skilled practitioner would be motivated to decrease turbidity of the hair composition to manipulate the clarity of the composition to provide for an aesthetically pleasing product.

Response to Arguments

Applicant argues that Shabita (EP) teaches a composition containing an oxyalkylenized xanthan gum. It is argued that the instant invention claims a composition wherein the fixative is heat-treated xanthan gum. Applicant argues there is no suggestion of a heat-treated xanthan gum. It is argued that Shibata states that xanthan gum does not work. Applicant argues that Shibata does not teach the method of making the composition or a surfactant-free mousse. Lastly, it is argued that there is not reason to combine EP and JP since JP does not mention oxyalkylenized xanthan gum.

Applicant's arguments have been fully considered but they are not persuasive. Firstly, it should be noted that the scope of the claims do not exclude xanthan gum derivatives or substituent moieties since the scope of the claims include all xanthan gum variation. Secondly, it should be noted that the claims recite "the xanthan gum has been heat treated at a moisture content of less than 25%, a temperature of at least about 60 Celsius for at least about 30 minutes." The examiner points to page 3 and examples that prepare the oxyalkylenized xanthan gum wherein the gum is heat treated at 40-100 degrees Celsius and preferably at 60-80 degrees Celsius for 3-20 hours. Therefore the only teaching that is lacking in EP and as set forth in the last office action, is the moisture content of the gum. Thus, JP is relied upon for this teaching. JP clearly teaches that when the xanthan gum is heated for 5 hours at 105 degrees Celsius, the gum will have a drying decrease in the instant amount. Therefore, since EP teaches heating the xanthan gum at JP's time and temperature regardless of an additional moiety, EP implicitly has the same moisture content. Further, JP states that the essential xanthan gum structural formula simply becomes entangled to yield properties

on page 4; therefore since EP also teaches heating the xanthan gum to prepare the oxyalkylenized xanthan gum, the structure of gum will also become entangled.

In regards to the method of making, firstly it should be noted that the claims merely recite the gum being dispersed in water and then missing with other hair components. The examiner points out that the claim's scope does not exclude other solvents such as ethanol or methanol; therefore although EP teaches dispersing the gum in alcohol/water and then it is mixed with other components. Furthermore, on page 9, EP teaches that the method of making is obvious to one of ordinary skill in the art.

In regards to EP teaching that xanthan gum is not useful, the examiner points out that EP teaches the unmodified xanthan gum does not work, which is the same aspect that the applicant is claiming: that a modified gum works better.

Lastly, in regards to the surfactant-free mousse, the examiner points out that since EP teaches a composition without a surfactant and demonstrates this is done in the art, it is within the skill to formulate a composition such as a mousse without a surfactant.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 in view of Sajic et al (6.017.860).

As set forth above, JP 11-236310 teaches a composition containing xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics and in the form of a cream or gel. The reference teaches the method of making xanthan gum prior to mixing it into a cosmetic composition. The reference discloses that xanthan gum provides stability to

the composition but has low viscosity and a greasy feel if too much is added. The reference discloses heating the gum 100 degrees and above to increase viscosity, and not to heat it above 140 degrees to avoid discoloration of the gum. The reference teaches the preferable range of the gum to be 5000-22000 cPs and thus it can be used in small quantities. (Note 4-6 and example 1).

JP 11-236310 does not specify the curl retention or utilizing a second polymer in the composition.

Sajic et al teach hair compositions with increasing holding capacity. The composition contains surfactants and styling aides in the form of anionic polymers and alkali metal salts thereof, swellable polymer thickening agents and other optional agents. See column 6, lines 6-11. The reference teaches the method of applying the composition to the hair and the ability of restyling the hair, which has been treated with the hair composition. The hair moistened with water, combed into desired configuration, and dried. See column 5, lines 60-66. Sajic et al teach the turbidity of the compositions (Note examples). Further, the reference teaches the 90% curl retention at high humidity and the styling effect of the inventive composition (Note Table 3 and 4 and examples).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of JP 11-236310 and Sajic et al and include a secondary polymer to yield the instant curl retention. One would be motivated to do to increase the style-retention capacity of the composition since Sajic teaches a fixative composition containing both xanthan gum and an anionic polymer to increase the styling/holding capacity of the hair composition.

Response to Arguments

Applicant argues that Rule 132 declaration provides that JP and Sajic do not teach the instant curl retention as evidenced by example 3 in instant specification. It is argued that Sajic teaches shampoos that are intended to be washed.

Firstly in regards to the secondary reference, Sajic is relied upon for its specific teachings of a secondary fixative polymer and not the curling property of the composition. JP teaches the broad aspect of the claim. It is the examiner's position that JP's compositions containing the xanthan gum in the instant amount and with the instant properties would yield the same curl retention. JP teaches that xanthan gum has excellent film-forming capabilities and is utilized in the amount of 0.01-2%. The examiner points out that this amount falls within the range of applicant's amount on page 7 wherein applicant states that the gum must be in the preferred amount of 1% and less than 3%. Sajic clearly shows that the combination of xanthan gum and a second polymer (as seen in the applicant's examples) provides for a fixative composition; therefore the motivation to utilize a second polymer in JP is to increase the hair-holding capacity.

Applicant's arguments have been fully considered but they are not persuasive. Firstly, example 3 is noted wherein only heat-treated xanthan gum is utilized. However the examiner points out that the examples in the specification are carried out at a temperature 72 degrees Fahrenheit, a relative humidity of 90%, for a time period of 2 hours. Whereas in the declaration the applicant compares JP and Sajic is performed at the same temperature and relative humidity but for a period of 8 hours. This is not a

proper comparison. Therefore the declaration under 37 CFR 1.132 filed March 7, 2003 is insufficient to overcome the rejection of claims 1-22 based upon the obviousness rejection.

Art of Interest

The prior art US 6,147,038 is cited as art of interest for its general teaching at the time the invention was made of turbidity as measured in NTU.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is (703) 305-2147. The examiner can normally be reached on M-F (7:30-4:30).

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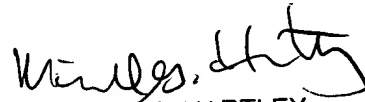
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (703) 308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Sharmila S. Gollamudi

December 15, 2003


MICHAEL G. HARTLEY
PRIMARY EXAMINER